Operation

GrindLazer™

Patents Pending

3A0101B

ENG

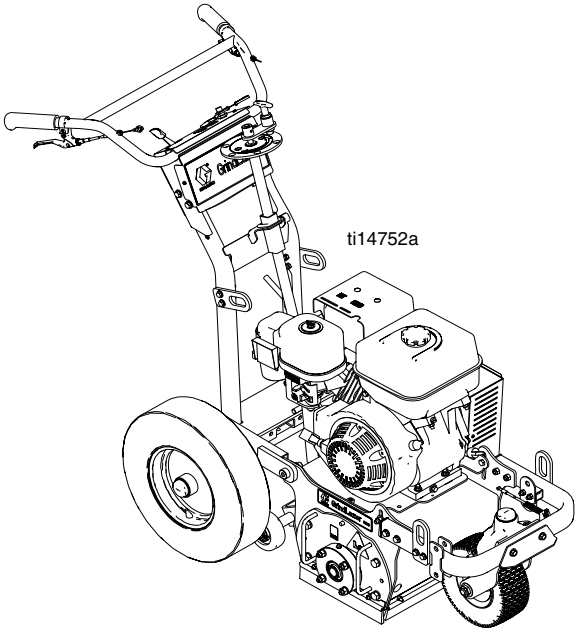
- Designed to grind flat, horizontal concrete or asphalt surfaces. For removal of materials from concrete and asphalt surfaces. For professional outdoor use only -

Model 571002 - Forward cut
GrindLazer 270 (270 cc / 9 hp)

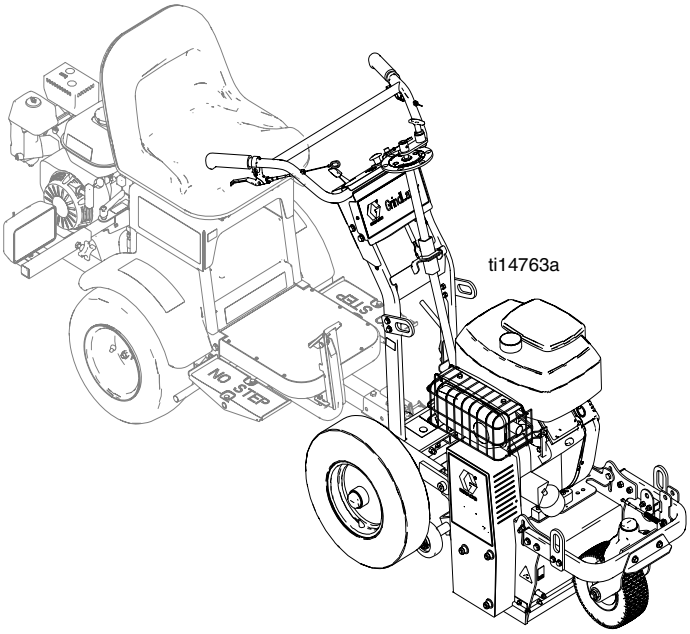
Model 571003 - Forward cut
GrindLazer 390 (390 cc / 13 hp)

Model 571004 - Reverse up-cut (Must be used with LineDriver™)
GrindLazer 480 (480 cc / 16 hp)

IMPORTANT SAFETY INSTRUCTIONS
Read all warnings and instructions in this manual. Save these instructions.



GrindLazer 270 and 390



GrindLazer 480

Related Manuals:
Repair - 3A0102
Parts - 3A0103

(Drums, cutters, and LineDriver™ sold separately)

HO03

PROVEN QUALITY. LEADING TECHNOLOGY.

Warnings

The following warnings are for the setup, use, grounding, maintenance, and repair of this equipment. The exclamation point symbol alerts you to a general warning and the hazard symbol refers to procedure-specific risk. Refer back to these warnings. Additional, product-specific warnings may be found throughout the body of this manual where applicable.

⚠ WARNING




DUST AND DEBRIS HAZARD

Use of this equipment to grind concrete and other paving materials can result in the release of potentially harmful dust or chemicals from the materials.

- For use only by sophisticated users familiar with applicable governmental safety and industrial hygiene regulations.
- Use equipment only in a well-ventilated area.
- Wear a properly fit-tested and government approved respirator suitable for the dust conditions.



EQUIPMENT MISUSE HAZARD

Misuse can cause death or serious injury.

- Do not operate the unit when fatigued or under the influence of drugs or alcohol.
- Do not leave the work area while equipment is energized. Turn off all equipment when equipment is not in use.
- Check equipment daily. Repair or replace worn or damaged parts immediately with genuine manufacturer's replacement parts only.
- Do not alter or modify equipment.
- Use equipment only for its intended purpose. Call your distributor for information.
- Keep children and animals away from work area.
- Comply with all applicable safety regulations.
- Maintain a safe operating distance from other people in the work area.
- Avoid any pipes, columns, openings, or any other objects protruding from work surface.



MOVING VEHICLE HAZARD

Careless and reckless behavior causes accidents. Falling from vehicle, running into people or object, or being struck by other vehicles may result in serious injury or death.

- Do not step on forward/reverse pedals.
- Make turns slowly. Do not make turns greater than 45°.
- Loss of traction may occur going downhill. Do not operate on slopes greater than 15°.
- Do not carry passengers.
- Do not tow.
- Use with line striping equipment only.
- Use appropriate traffic control in all traffic areas. Refer to Manual on Uniform Traffic Control Devices (MUTCD), U.S. Department of Transportation, Federal Highway Administration or local highway and transportation regulations.




MOVING PARTS HAZARD

Moving parts can pinch or amputate fingers and other body parts.

- Keep clear of moving parts.
- Do not operate equipment with protective guards or covers removed.
- Before checking, moving, or servicing equipment, disable power supply.



BURN HAZARD

Equipment surfaces that are heated can become very hot during operation. To avoid severe burns, do not touch hot equipment. Wait until equipment has cooled completely.

⚠ WARNING



FIRE AND EXPLOSION HAZARD

Flammable fumes, such as solvent and paint fumes, in **work area** can ignite or explode. To help prevent fire and explosion:

- Use equipment only in well ventilated area.
- Do not fill fuel tank while engine is running or hot; shut off engine and let it cool. Fuel is flammable and can ignite or explode if spilled on hot surface.
- Keep work area free of debris, including solvent, rags and gasoline.
- Keep a fire extinguisher in work area.



CARBON MONOXIDE HAZARD

Exhaust contains poisonous carbon monoxide, which is colorless and odorless. Breathing carbon monoxide can cause death. Do not operate in an enclosed area.

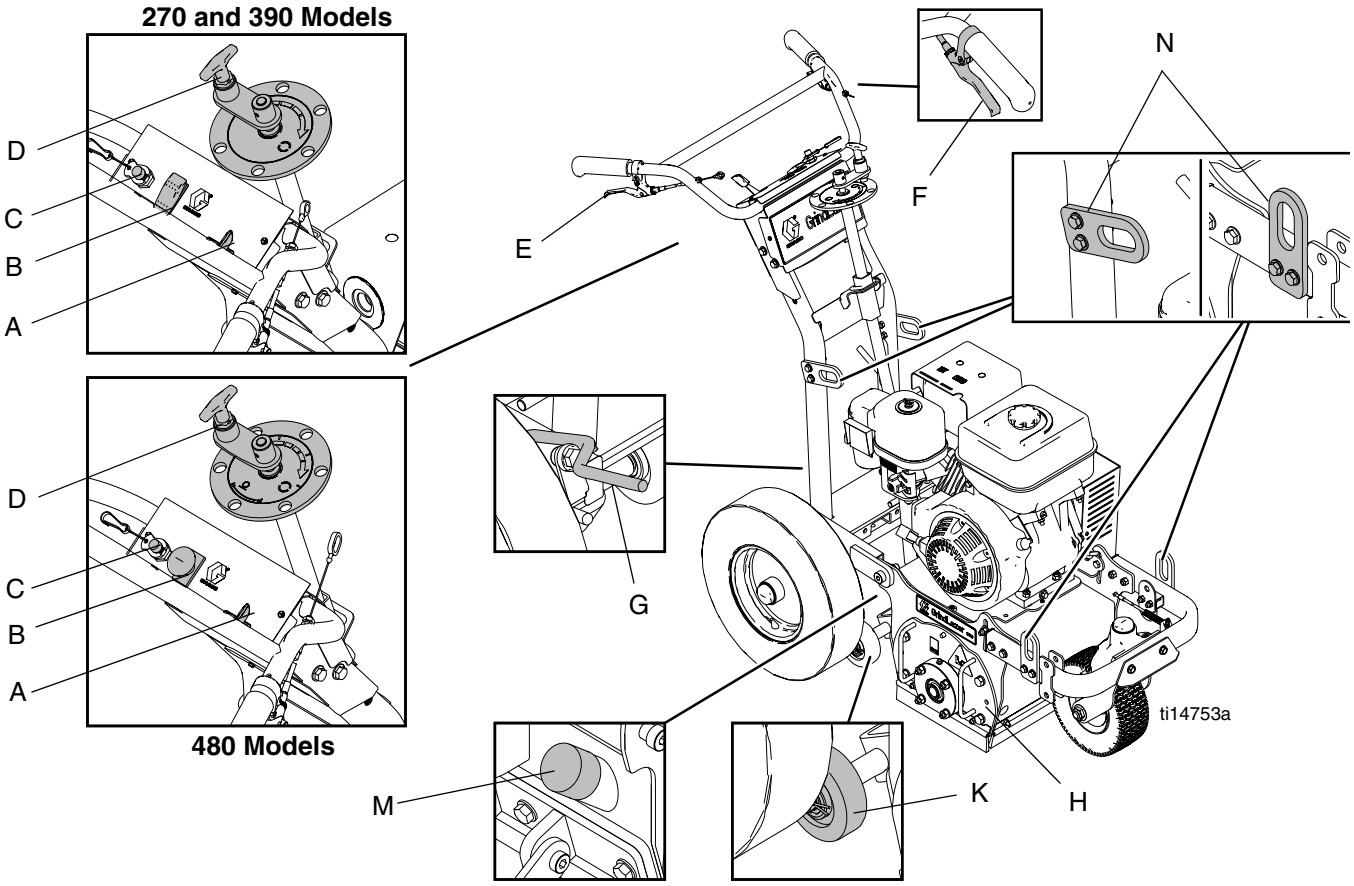


PERSONAL PROTECTIVE EQUIPMENT

You must wear appropriate protective equipment when operating, servicing, or when in the operating area of the equipment to help protect you from serious injury, including eye injury, inhalation of dust or chemicals, burns, and hearing loss. This equipment includes but is not limited to:

- Protective eye wear
- Protective shoes
- Gloves
- Hearing protection
- Properly fit-tested and government approved respirator suitable for the dust conditions

Component Identification



	Component	Description
A	Engine Throttle Lever	Adjusts engine speed.
B	Engine Stop Switch	Supplies power to Engine
C	Emergency Shut-Off	Clamps onto the operator and shuts engine off if cord is disconnected during operation.
D	Drum Adjustment Dial	Sets depth of drum cut.
E	Drum Engage Lever	When lever is engaged, handle bars can be pushed down to raise the cutting drum off of surface and locked into UP position. Once drum is locked in UP position, GrindLazer can be moved around without drum touching surface.
F	Front Wheel Lock Lever	Front wheel is usually locked to guide GrindLazer in a straight line. When lever is engaged, front wheel becomes unlocked and is allowed to turn freely.
G	Rear Wheel Parking Brake	Prevents rear wheel from moving.
H	Drum Access Panel	Removable plate that allows access to replace cutting drum.
K	Depth Control Wheels	Levels cutting drum.
M	Vacuum Port	Port to attach vacuum to reduce dust and debris during operation.
N	Lift Points	Reinforced points used for lifting GrindLazer during transportaton or repair.

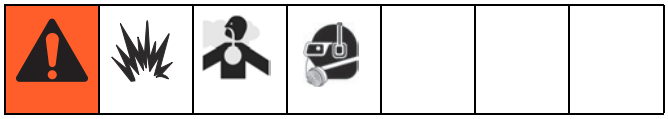
Operation

The GrindLazer is designed to plane flat, horizontal concrete or asphalt slabs.

GrindLazer 270 (270 cc) and **GrindLazer 390** (390 cc) models are designed to be operated by a single operator positioned at the back of the unit, or in conjunction with LineDriver. **GrindLazer 480** (480 cc) can ONLY be operated with LineDriver.

Maintain a safe operating distance from other people in the work area. Avoid any pipes, columns, openings, or any other objects protruding from work surface.

Start-Up



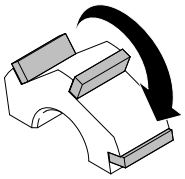
Before starting engine, perform the following:

- Read and understand engine manual
- Make sure all guards are in place and secure
- Make sure all mechanical fasteners are secure
- Inspect for damage to engine and other exterior surfaces
- Use correct cutters for each job. Make sure drum is balanced and the correct number, size and type of cutter wheels are being used. Make sure drum shaft is locked and secured.
- Inspect work area to locate any pipes, columns, deck inserts, or other objects protruding from work surface. Avoid these objects during operation.

Drum Installation/Replacement

Installation

NOTE: Carbide Flail Cutter drums do not require specific orientation or direction. Carbide Millers and Diamond Blades are directional. They should be stacked so that the arrows on the Millers and Blades face the same direction as the rotation of the drum.

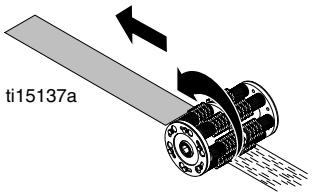


ti15141a **Carbide Miller**



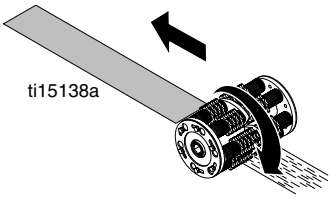
Diamond Blade ti15142a

270 and **390** models are designed for “forward cut” grinding (the drum rotates in the same direction that it travels). **480** models are design for “reverse (up cut)” grinding (the drum rotates in the opposite direction that it travels).



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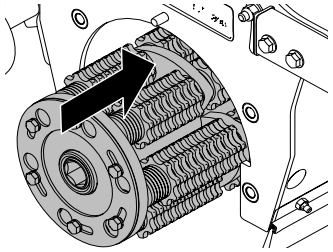
Forward Cut (270/390 Models)



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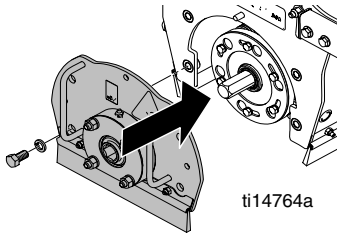
Reverse (up cut) 480 Models

1. Slide replacement Drum onto hex shaft.



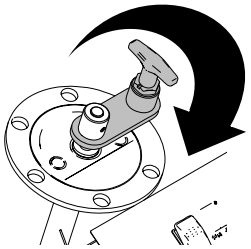
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2. Replace Drum Access Panel (H).

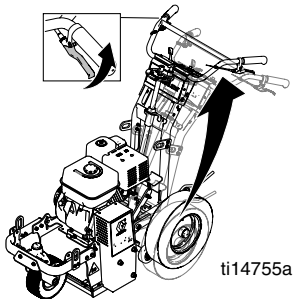


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3. Lower Drum Adjustment Dial (D) and pull Drum Engage Lever (E) so drum rests on ground.

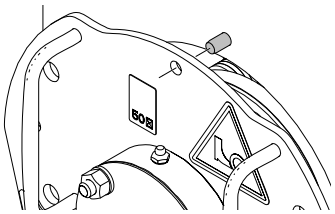


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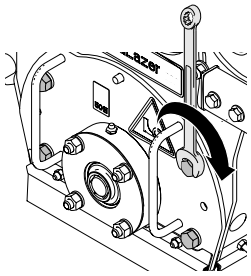
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Door pin and hole should line up.



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4. Tighten four bolts on Drum Access Panel (H).

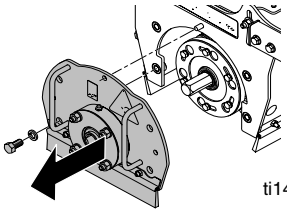


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5. Turn Drum Adjustment Dial (D) to maximum height.

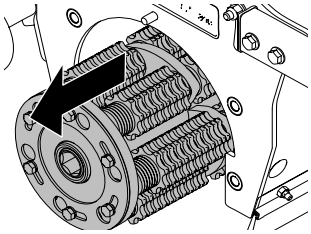
Removal

1. Remove four bolts and Drum Access Panel (H).



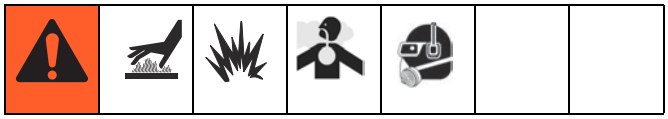
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2. Slide drum off of hex shaft.

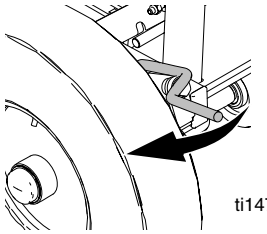


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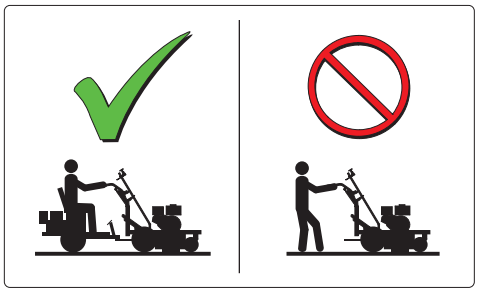
Starting the Engine



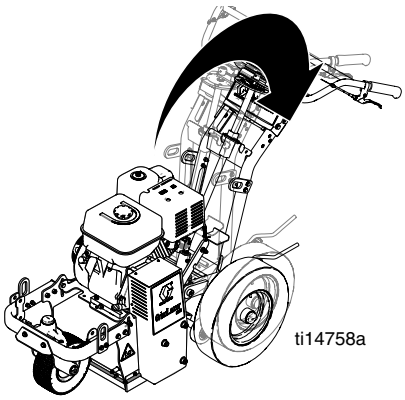
3. Engage Rear Wheel Brake (G) to prevent Grind-Lazer from moving.



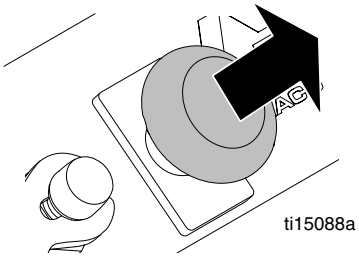
4. **480 Models Only:** Attach LineDriver to GrindLazer.



5. Push down on handle bars until drum is locked into UP position.

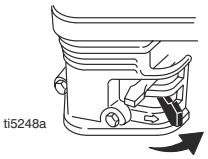


6. **480 Models Only:** Make sure Engine Stop Switch (C) is in UP position.

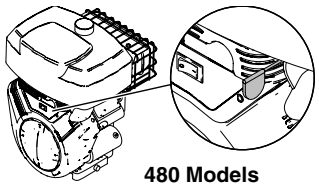


7. **Start Engine:**

a. Move fuel valve to open.

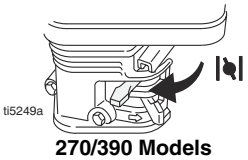


270/390 Models

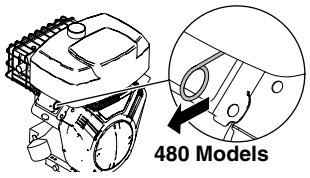


480 Models

b. Move choke to closed.

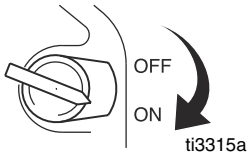


270/390 Models

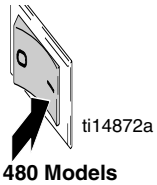


480 Models

c. Set Engine Power Switch (B) to ON.

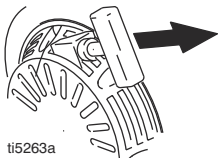


270 & 390 Models

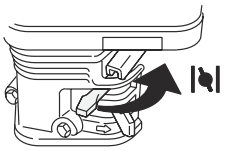


480 Models

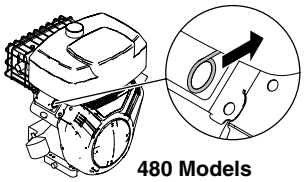
d. Pull starter cord.



e. After engine starts, move choke to open.

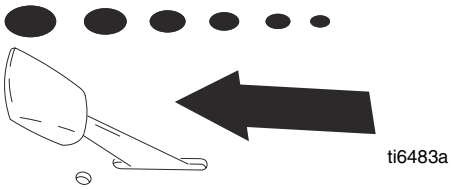


270/390 Models

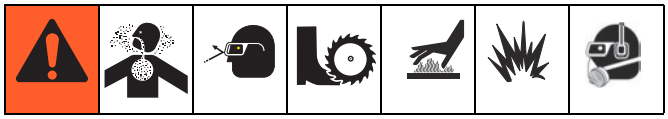


480 Models

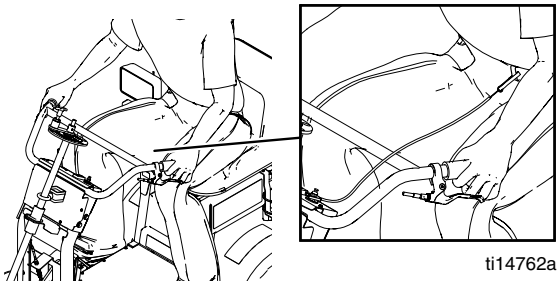
f. Set throttle to desired setting.



Cutting Material

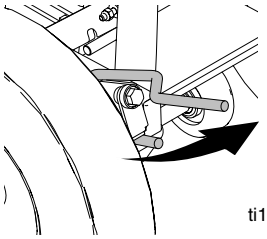


1. **Start Engine**, see page 7.
2. Connect Emergency Shut-Off Cord (C) to operator.



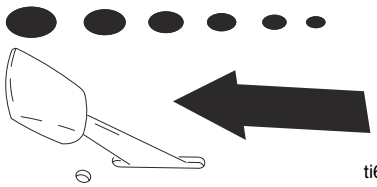
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3. Disengage Rear Wheel Brake (G).



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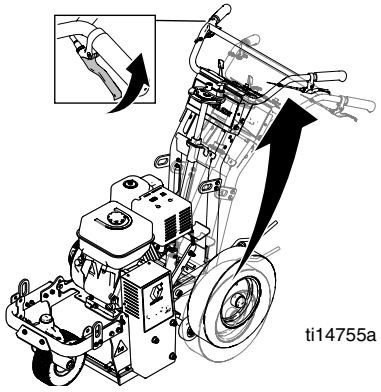
4. Slide Engine Throttle Lever (A) to desired setting.



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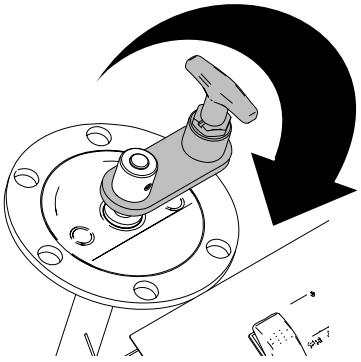
NOTE: Drum clutch will not engage when engine is running at idle. **480 Models:** LineDriver must be attached to GrindLazer.

5. Push down on handle bars, pull engagement lever, and lower drum into DOWN position.



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6. Rotate Drum Adjustment Dial (D) until drum comes into contact with surface and desired depth is reached.



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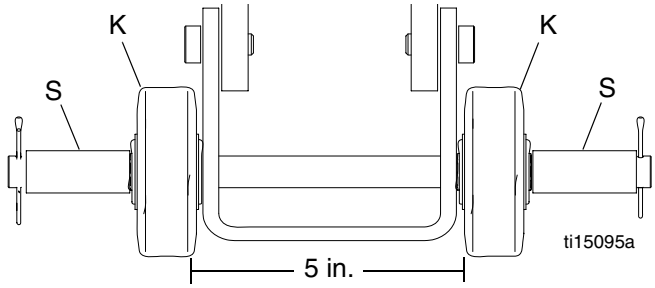
NOTE: Several test cuts may be needed to dial-in desired cutting depth.

NOTE: On harder surfaces, it may be best to make several passes in increments of 1/32 in. to 1/8 in.

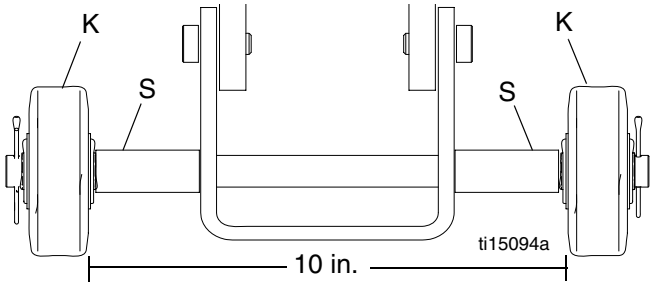
Depth Control Wheels

Using Depth Control Wheels as a 5 in. or 10 in. Wide Cutting Guide

To make a **5 in. cut**, install two spacers (S) on **outside** of Depth Control Wheels (K).



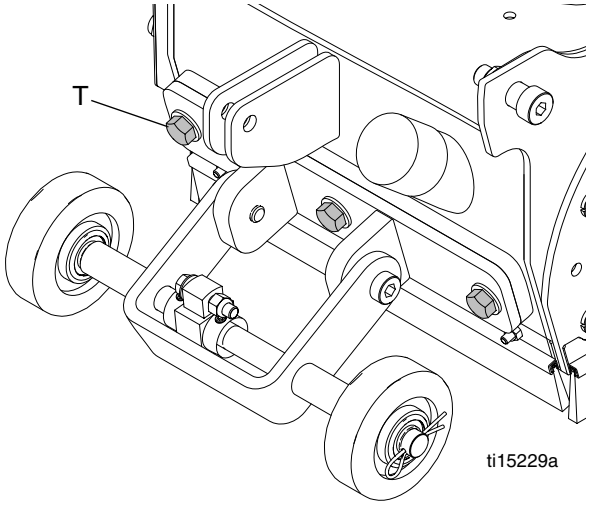
To make a **10 in. cut**, install two spacers (S) on **inside** of Depth Control Wheels (K).



How to Level the Drum

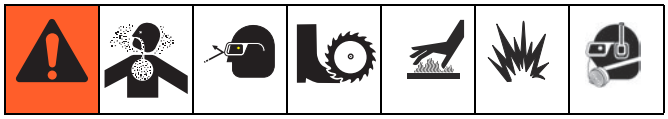
To properly level the drum, GrindLazer must be resting on a flat level surface.

1. Make sure drum is properly installed (see **Drum Replacement**, page 6).
2. Push down on handle bars, pull engagement lever, and lower drum into DOWN position.
3. Loosen (but do not remove) three bolts (T) on Depth Control Wheel plate.

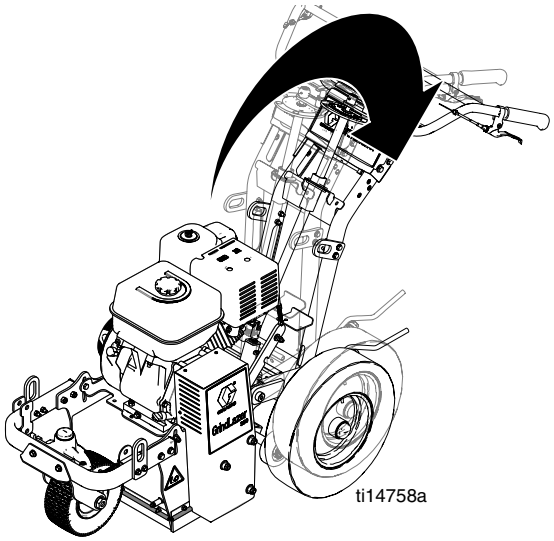


4. Adjust plate until guide wheels lay flat on surface.
5. Tighten three bolts (T) on plate.

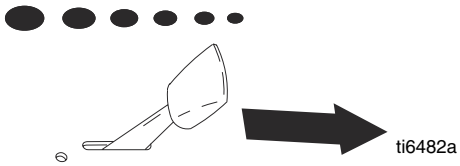
Stop Cutting Material



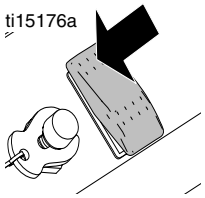
1. Push down on handle bars until drum is locked into UP position.



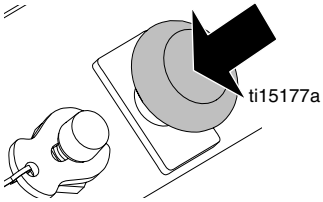
2. Slide Engine Throttle Lever (A) to low setting.



3. Turn Engine Power Switch (B) OFF.

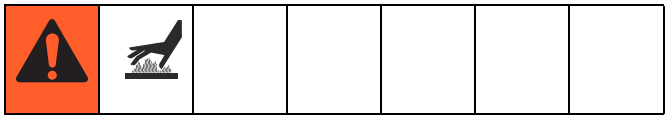


270 & 390 Models



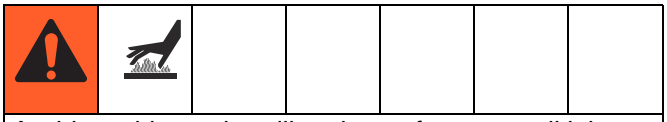
480 Models

Clean Up



Clean the entire exterior of the machine after it has cooled at the end of each work day. Check for worn or damaged parts and perform any required **Maintenance**, page 12.

Cutting Drum Assemblies



Avoid touching or handling drum after use until it has completely cooled.

Different drum configurations can be used for different applications. There are three different types of drum assemblies compatible with the GrindLazer: carbide flails, carbide millers, and diamond blades.

Carbide Flail Cutter/Assembly

Gradually adjust depth down to remove marking line (minimal amount of paved surface should be removed).

Carbide Miller Cutter/Assembly

Best results for deep cuts are achieved by making several thin passes. A single pass should be no deeper than 1/32 in. or damage to rods and cutters could occur.

Diamond Blade Assembly (480 Models Only)

Watch Depth Control Wheels (K) during operation; if wheels are spinning, proper depth is being achieved.

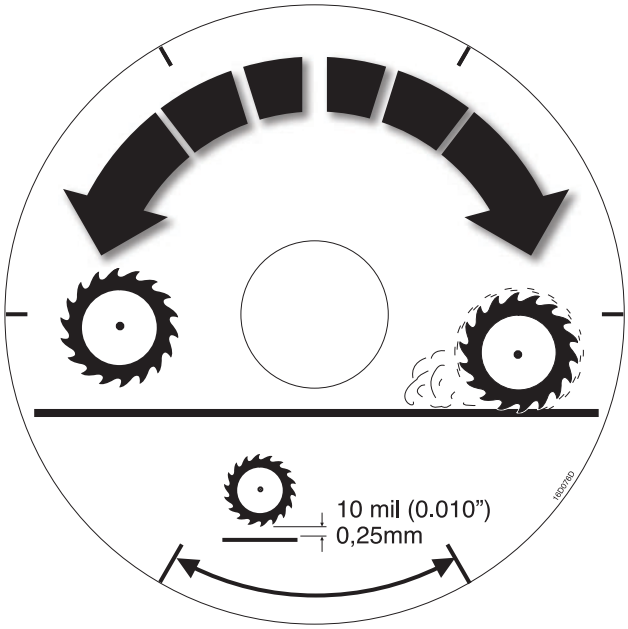
NOTICE

Diamond Blades are designed to be cooled by airflow around the blades. Lift blade out of cut every 10 to 15 seconds, then run at full speed for several seconds to prevent excessive heat build-up which could damage the blades.

Cutter and Drum Assemblies

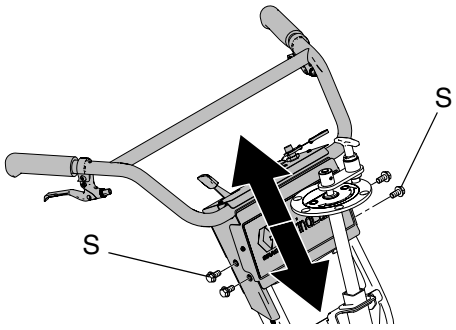
- The engine should not labor. Run engine at full speed and adjust forward speed to fit the work being performed. Harder concrete surfaces will have to be cut at a slower pace than asphalt or other softer surfaces.

NOTE: Each increment on Drum Adjustment Dial (D) is 0.010 in. (0.25 mm) depth change of cutting drum.

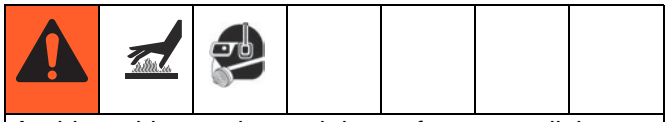


Handle Bar Adjustment

To adjust handle bar: remove four screws (S), slide handle bar to desired height, and replace screws and tighten.



Maintenance



Avoid touching engine and drum after use until they have completely cooled.

The following steps should be performed to maintain proper operation and sustain the life of the GrindLazer.

BEFORE OPERATION:

- Visually inspect the entire unit for damage or loose connections
- Check engine oil (see engine manual)
- Check drum bushings and cutters
- Check drum for uneven wear
- Check for proper tire pressure

DAILY:

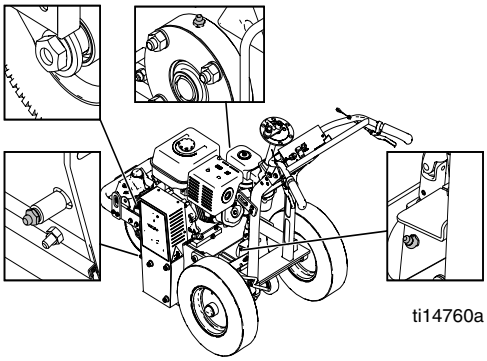
- Insert and clean air filter element
- Clean dust and debris from exterior of unit (do NOT use pressure washer or other high pressure cleaning equipment)
- Check engine oil level and fill as necessary
- Check and fill gas tank
- Remove air filter cover and clean element. Replace element if necessary. Replacement elements can be purchased from your local engine dealer.

AFTER THE FIRST 20 HOURS OF OPERATION:

- Drain engine oil and refill with clean oil. See engine manual for correct viscosity.

EVERY 40-50 HOURS OF OPERATION:

- Change engine oil (see engine manual)
- Grease wheel bearings
- Insert grease into the grease fittings on the drum mount and center hinge



AS REQUIRED:

- Check drive belt and tension and tighten or replace as needed

  For additional information about engine maintenance, see Honda (270 and 390 models) or Briggs and Stratton (480 models) engine manual.

Caster Wheel Maintenance

EVERY MONTH:

- Grease wheel bearing
- Check pin for wear. If pin is worn out there will be play in caster wheel. Reverse or replace pin as needed.
- Check caster wheel alignment as necessary. To align: loosen set screw, align wheel, and tighten screw.

Front Swivel Tire Alignment

1. Loosen cap screw.
2. Rotate front wheel fork left or right, as necessary, to straighten alignment.
3. Tighten cap screw. Push GrindLazer and let it roll with hands off of GrindLazer.

   NOTE: If GrindLazer rolls right or left, repeat steps 1 and 3 until GrindLazer rolls straight.

Technical Data

GrindLazer 270 (Model 571002)		
Dimensions		
	Unpackaged	**Packaged**
Height in./cm:	46 (116.8)	50.5 (128.3)
Width in./cm:	28 (71.1)	37 (94.0)
Length in.cm:	62 (157.5)	73 (185.4)
Weight lb/kg:	300 (136)	400 (181)
Noise (dBa)		
Sound Power per ISO 3744:	107.3	
Sound Pressure measured at 3.1 feet (1m):	91.6	
Vibration (m/sec^2) per ISO 3744		
Without LineDriver:	7.9	
With LineDriver:	8.3	
Power Rating (HorsePower) per SAE J1349		
8.0 @ 3600 rpm		
GrindLazer 390 (Model 571003)		
Dimensions		
	Unpackaged	**Packaged**
Height in./cm:	46 (116.8)	50.5 (128.3)
Width in./cm:	28 (71.1)	37 (94.0)
Length in.cm:	62 (157.5)	73 (185.4)
Weight lb/kg:	310 (141)	410 (186)
Noise (dBa)		
Sound Power per ISO 3744:	109.3	
Sound Pressure measured at 3.1 feet (1m):	93.6	
Vibration (m/sec^2) per ISO 3744		
Without LineDriver:	7.5	
With LineDriver:	5.9	
Power Rating (HorsePower) per SAE J1349		
11.0 @ 3600 rpm		
GrindLazer 480 (Model 571004)		
Dimensions		
	Unpackaged	**Packaged**
Height in./cm:	46 (116.8)	50.5 (128.3)
Width in./cm:	28 (71.1)	37 (94.0)
Length in.cm:	62 (157.5)	73 (185.4)
Weight lb/kg:	330 (150)	430 (195)
Noise (dBa)		
Sound Power per ISO 3744:	108.6	
Sound Pressure measured at 3.1 feet (1m):	92.1	
Vibration (m/sec^2) per ISO 3744		
With LineDriver:	4.9	
Power Rating (HorsePower) per SAE J1349		
16.0 @ 3600 rpm		

Maximum storage time, years	5
Maximum lifetime, years	10
Power efficiency factor	200 ground meters per liter fuel

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Graco warrants all equipment referenced in this document which is manufactured by Graco and bearing its name to be free from defects in material and workmanship on the date of sale to the original purchaser for use. With the exception of any special, extended, or limited warranty published by Graco, Graco will, for a period of twelve months from the date of sale, repair or replace any part of the equipment determined by Graco to be defective. This warranty applies only when the equipment is installed, operated and maintained in accordance with Graco's written recommendations.

This warranty does not cover, and Graco shall not be liable for general wear and tear, or any malfunction, damage or wear caused by faulty installation, misapplication, abrasion, corrosion, inadequate or improper maintenance, negligence, accident, tampering, or substitution of non-Graco component parts. Nor shall Graco be liable for malfunction, damage or wear caused by the incompatibility of Graco equipment with structures, accessories, equipment or materials not supplied by Graco, or the improper design, manufacture, installation, operation or maintenance of structures, accessories, equipment or materials not supplied by Graco.

This warranty is conditioned upon the prepaid return of the equipment claimed to be defective to an authorized Graco distributor for verification of the claimed defect. If the claimed defect is verified, Graco will repair or replace free of charge any defective parts. The equipment will be returned to the original purchaser transportation prepaid. If inspection of the equipment does not disclose any defect in material or workmanship, repairs will be made at a reasonable charge, which charges may include the costs of parts, labor, and transportation.

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Original instructions. This manual contains English. MM 3A0101

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